

CLAIMS

1. A vibrating device which attaches to containers which hold, or contain materials used in dentistry.
2. A vibrating device as recited in claim 1, which attaches to tubes which hold, or contain materials used in dentistry.
3. A vibrating device as recited in claim 1, which attaches to trays which hold, or contain materials used in dentistry.
4. A vibrating device as recited in any one of claims 1 and 2, which dispense materials used in dentistry.
5. A vibrating device as recited in any one of claims 1 to 4 which attaches to tubes or trays or other containers which hold, or contain or dispense materials used in dentistry with an attachment which is clamp-like in nature.
6. A vibrating device as recited in any one of claims 1 to 4 which attaches to tubes or trays or other containers which hold, or contain or dispense materials used in dentistry with an attachment which is clamp-like in nature said clamp attaches the device to the or trays or other containers which hold, or contain or dispense materials used in dentistry with a clamp which is rigidly flexible and fabricated to engage and grip said dental container so as to hold and friction lock said container to the vibrating device.

7. A vibrating device as recited in any one of claims 1 to 4 which attaches to tubes or trays or other containers which hold, or contain or dispense materials used in dentistry with an attachment which is clamp-like in nature said clamp attaches the device to the or trays or other containers which hold, or contain or dispense materials used in dentistry with a clamp consisting of an upper and lower bar or plate which is spring loaded and which said springs applies pressure on said bars or plates engaging the said dental material container, and said spring is connected to a lever which can be regulated by pressure exerted by a finger or thumb.
8. A vibrating device as recited in any one of claims 1 to 4 which attaches to tubes or trays or other containers which hold, or contain or dispense materials used in dentistry with an attachment which is clamp-like in nature said clamp attaches the device to the or trays or other containers which hold, or contain or dispense materials used in dentistry with an elastic rubber band engaging the said dental material container.
9. A vibrating device as recited in any one of claims 1 to 4 which attaches to tubes or trays or other containers which hold, or contain or dispense materials used in dentistry with an attachment which is clamp-like in nature said clamp attaches the device to the or trays or other containers which hold, or contain or dispense materials used in dentistry with a clamp consisting of an upper and lower bar or plate which is enveloped or surrounded by an elastic rubber band which applies pressure on said bars or plates engaging the said dental material container.
10. A vibrating device as recited in any one of claims 1 to 4 which attaches to tubes or trays or other containers which hold, or contain or dispense materials used in dentistry, and which imparts to or transmits such vibration to said materials used in dentistry.
11. A vibrating device as recited in any one of claims 1 to 4 which attaches to tubes or trays or other containers which hold, or contain or dispense materials used in dentistry, wherein said material consists essentially of one selected from the group consisting of, but not limited to, polyvinylsiloxane, silicone, polyether, rubber base, alginates, plaster, pastes, gel, restorative materials, composite restorative materials,

cements, glass ionomer or modified glass ionomers, and which imparts to or transmits such vibration to said materials used in dentistry.

12. A vibrating device as recited in any one of claims 1 to 4 wherein the vibrator is powered by a battery or batteries.
13. A device as recited in any one of claims 1 to 4 wherein the vibrations of the vibrator is continuous or intermittent or variable.
14. A method of extruding or dispensing dental materials from a container with vibration as recited in any one of claims 1 to 4 by attaching a vibrating mechanism to the dental material container and transmitting said vibration to the dental or impression material.
15. A method of taking an impression of a natural or prepared tooth or teeth, ready to accept a dental prosthesis or restoration, comprising but not limited to the steps of:
 - (A) Attaching a vibrating device to the dental or impression tray as recited in any one of claims 1-4.
 - (B) Attaching a vibrating device to the dental or impression dispenser as recited in any one of claims 1,2,4.
 - (C) Turning the vibrating device on, and extruding the unset impression material from said impression container through the mixing tube.
 - (D) While vibrating, placing the mixed unset impression material into a tray or other container. Placing said tray or other container around the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the mixed unhardened or unset impression material from the vibrator attached to the tray or container.
 - (E) Stop vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
 - (F) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums

16. A method of taking an impression of a natural or prepared tooth or teeth, ready to accept a dental prosthesis or restoration, comprising but not limited to the steps of:

- (G) Attaching a vibrating device to the dental or impression tray as recited in any one of claims 1-4.
- (H) Attaching a vibrating device to any one of a dental, dental tube, or impression dispenser. As recited in any one of claims 1,2,or 4. containing a heavy bodied impression material.
- (I) Attaching a second vibrating device to the second dental or impression dispenser as recited in any one of claims 1,2,4. containing a lighter bodied impression material.
- (J) As recited in 19 (H), While the vibrator attached to the impression tube, or syringe or container is turned on, extruding or placing the unset heavy bodied impression material through the mixing tube into a tray or other container as recited in any one of claims 1 – 4.
- (K) Turning the second vibrating device on, and extruding the mixed unset lighter bodied impression material from the container of the second impression dispenser through the mixing tube and while vibrating, placing the mixed unset lighter bodied impression material from this second tube into the sulcus around the prepared tooth abutment.
- (L) Placing said tray(16 G) or other container around the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the mixed unhardened or unset heavy bodied impression material from the vibrator attached to the tray or container.
- (M) Stop vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (N) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.

17. (1 Stage) A method of taking an impression of a natural or prepared tooth or teeth, ready to accept a dental prosthesis or restoration, comprising the steps of:

- (A) Attaching a dental or impression tray to the dental vibrating device as recited in any one of claims 1-5.
- (B) (OPTIONAL STEP) Attaching a dental vibrating device to the impression tube, syringe or container or container holding the impression material as recited in any one of claims 1, 2,4.
- (C) (OPTIONAL STEP) Turning on the vibrator as the unset impression material is being extruded and mixed in cartridge nozzle.
- (D) Placing the mixed unset impression material into a tray or other container as recited in any one of claims 1 to 5.
- (E) Placing said tray or other container around the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the unhardened or unset impression material from the vibrator attached to the tray or container.
- (F) Stop vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (G) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.

18. (2 Stages) A method of taking an impression of a natural or prepared tooth or teeth, ready to accept a dental prosthesis or restoration, comprising the steps of:

- (A) Attaching a dental or impression tray to the dental vibrating device as recited in any one of claims 1-5.
- (B) (OPTIONAL STEP) Attaching a dental vibrating device to the (#1) impression tube, syringe or container or container holding the impression material as recited in any one of claims 1, 2,4.
- (C) (OPTIONAL STEP) Turning on the vibrator as the unset heavier body or firmer setting impression material is being extruded and mixed in cartridge nozzle.
- (D) Placing the mixed unset heavier body or firmer impression material into a tray or other container as recited in any one of claims 1 to 5.
- (E) Placing said tray or other container around the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the unhardened or unset impression material from the vibrator attached to the tray or container.

- (F) Stopping vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (G) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.
- (H) Remove undercuts from set impression (with scalpel blade or bur or other means)
- (I) (OPTIONAL STEP) Turning on the vibrator attached to impression tube or container (#2) as lighter bodied or more fluid unset impression material is being extruded and mixed in cartridge nozzle.
- (J) Place lighter bodied or more fluid unset impression material into tray of heavier bodied set impression.
- (K) Replacing said tray filled with lighter bodied unset impression material lying in cavity of set heavier bodied impression material over the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the unhardened or unset lighter bodied impression material from the vibrator attached to the tray or container.
- (L) Stopping vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (M) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.

19. (3 Stages) A method of taking an impression of a natural or prepared tooth or teeth, ready to accept a dental prosthesis or restoration, comprising but not limited to the steps of:

- (N) Attaching a dental or impression tray to the dental vibrating device as recited in any one of claims 1-5.
- (O) (OPTIONAL STEP) Attaching a dental vibrating device to the (#1) impression tube syringe or container or container holding the impression material as recited in any one of claims 1, 2,4.
- (P) (OPTIONAL STEP) Turning on the vibrator as the unset heavier body or firmer setting impression material is being extruded and mixed in cartridge nozzle.
- (Q) Placing the mixed unset heavier body or firmer impression material into a tray or other container as recited in any one of claims 1 to 5.
- (R) Placing said tray or other container around the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the unhardened or unset impression material from the vibrator attached to the tray or container.

- (S) Stopping vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (T) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.
- (U) Remove undercuts from set impression (with scalpel blade or bur or other means)
- (V) (OPTIONAL STEP) Turning on the vibrator of impression container (#2) as lighter bodied or more fluid unset impression material is being extruded and mixed in cartridge nozzle.
- (W) Place lighter bodied or more fluid unset impression material into heavier bodied set impression.
- (X) Place lighter bodied or more fluid unset impression material into sulcus of prepared tooth abutment(s).
- (Y) Replacing said tray filled with lighter bodied unset impression material lying in cavity of set heavier bodied impression material over the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the unhardened or unset lighter bodied impression material from the vibrator attached to the tray or container.
- (Z) Stopping vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (AA) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.

20. (3 Stages) A method of taking an impression of a natural or prepared tooth or teeth, ready to accept a dental prosthesis or restoration, comprising but not limited to the steps of:

- (BB) Attaching a dental or impression tray to the dental vibrating device as recited in any one of claims 1-5.
- (CC) (OPTIONAL STEP) Attaching a dental vibrating device to the (#1) impression tube syringe or container or container holding the impression material as recited in any one of claims 1, 2, 4.
- (DD) (OPTIONAL STEP) Turning on the vibrator as the unset heavier body or firmer setting impression material is being extruded and mixed in cartridge nozzle.
- (EE) Placing the mixed unset heavier body or firmer impression material into a tray or other container as recited in any one of claims 1 to 5.

- (FF) Placing said tray or other container around the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the unhardened or unset impression material from the vibrator attached to the tray or container.
- (GG) Stopping vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (HH) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.
- (II) Remove undercuts from set impression (with scalpel blade or bur or other means)
- (JJ) (OPTIONAL STEP) Turning on the vibrator of impression container (#2) as medium bodied unset impression material is being extruded and mixed in cartridge nozzle.
- (KK) Place medium bodied impression material into heavier bodied set impression.
- (LL) (OPTIONAL STEP) Turning on the vibrator of impression container (#3) as light bodied unset impression material is being extruded and mixed in cartridge nozzle.
- (MM) Place lighter bodied or more fluid unset impression material into sulcus of prepared tooth abutment(s).
- (NN) Replacing said tray filled with medium bodied unset impression material lying in cavity of set heavier bodied impression material over the tooth or teeth, (natural or prepared abutment(s)) or gums using vibration imparted to the unhardened or unset medium and lighter bodied impression material from the vibrator attached to the tray or container.
- (OO) Stopping vibration after the impression tray or dental container is placed completely over the tooth or teeth, (natural or prepared abutment(s)) or gums. Wait until the impression material hardens and/or sets.
- (PP) Start vibration and then withdraw impression tray or container easily and atraumatically from teeth and gums.